Final Cut Pro Beginner and Intermediate Manual
Amherst College, Amherst, MA

Sara Blaylock & Marcus DeMaio
-updated Fall 2008-
Revision 002.1

Table of Contents

The Basics 03 – 09

Establishing a Home Directory 03
Opening Final Cut Pro 03 – 04
Setting your System Settings, aka
Pretty Much the Most Important Thing to Remember 04 – 05
Familiarizing Yourself with the Final Cut Pro Workspace 05 – 09

Importing Media into your Final Cut Pro Project 10 – 12

Log and Capture 10 – 11
Usable Formats 11 – 12
Importing Video
from pre-existing Files 12
from VHS, mini-DV, DVD or live stream 12
Importing Audio
from pre-existing Files 12
from VHS, mini-DV, DVD, live stream or Audio Cassette 12

Editing and Assembling Your Video 13 – 24

Editing Video
in the Viewer 13 – 15
Directly in the Timeline 15
Adding Tracks 15 – 16
Locking Tracks 16
Adding Effects 16
Using Video Generators: Text & Slugs 17 – 18
Rendering 18 – 19
Keyframing 19 – 20
Editing Audio
Directly in the Timeline 20 – 22
in the Viewer 22
Using Audio Transitions & Effects 22 – 24
Working with Sequences 24

Using iTunes to Import Music to Final Cut Pro 25 – 26

Finishing Your Project 27 – 29

Exporting Your Movie
for DVD 27
for Computer Playback 27 – 28
for the Internet 28 – 29
Recording to VHS or miniDV tape 29

Final Cut Pro Glossary 30 – 33

The Basics

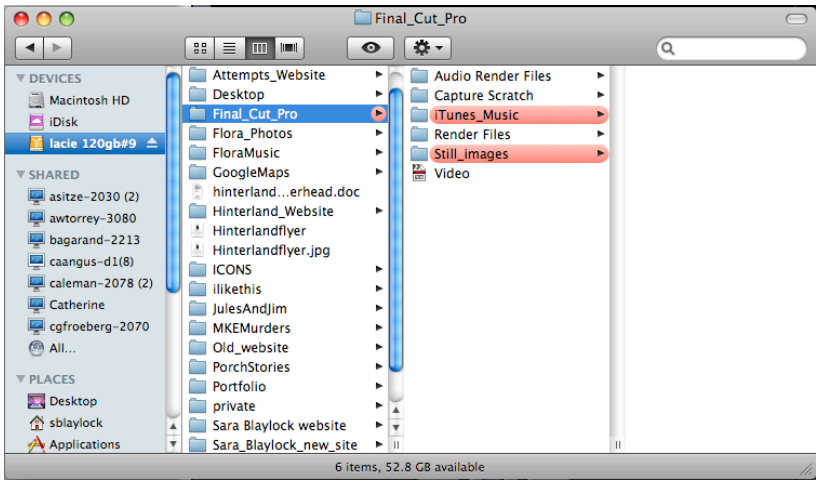
Establishing a Home Directory / Opening Final Cut Pro / Setting your System Settings, aka ***Pretty Much the Most Important Thing to Remember*** */ Familiarizing Yourself with the Final Cut Pro Workspace*

(Please see the Glossary for underlined terms.)

Establishing a Home Directory

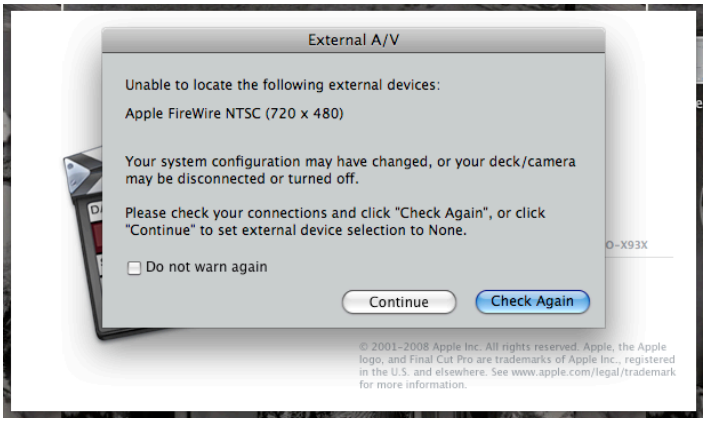
Before you begin any work in Final Cut Pro, you should set up a Home Directory. This is the folder where you will save your Final Cut Pro project, all the files you use in your project, and anything you Export. You will also set your System Settings to link to your Home Directory.

First create a folder on your external hardrive called "Final_Cut_Pro." When you set your System Settings (details to follow) you will direct Final Cut Pro to this folder. Also notice that there is a separate folder for "iTunes Music" and "Still images." These are just a few examples of folders you can create to better organize the files you Import into your project. *See page 12 for details about importing media.*



Opening Final Cut Pro

Now you are ready to open Final Cut Pro and get started. If you want to import footage, you will want your camera or a miniDV deck connected to the computer. If these are not powered up or connected with a firewire properly, you will see this message:


External A/V
Unable to locate the following external devices:
Apple FireWire NTSC (720 x 480)
Your system configuration may have changed, or your deck/camera may be disconnected or turned off.
Please check your connections and click "Check Again", or click "Continue" to set external device selection to None.
Do not warn again
Continue
Check Again
© 2001–2008 Apple Inc. All rights reserved. Apple, the Apple logo, and Final Cut Pro are trademarks of Apple Inc., registered in the U.S. and elsewhere. See www.apple.com/legal/trademark for more information.

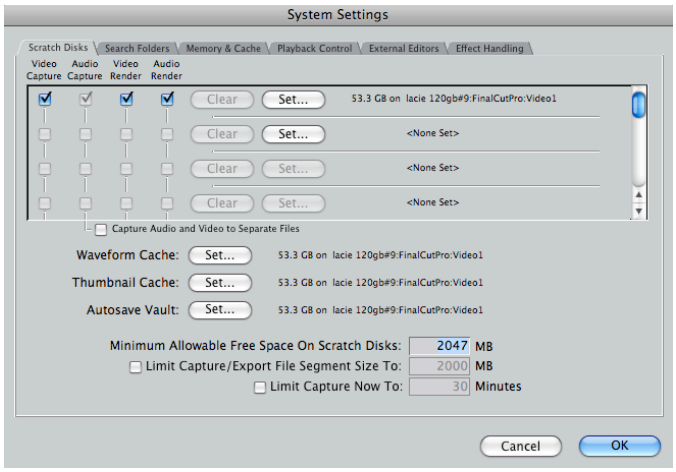
Turn on or connect your camera or miniDV deck properly. Select "Check Again"and you'll be good to go.

On the other hand, if you do not need to import footage and you just want edit your project, select "Continue."

Setting your System Settings, aka *Pretty Much the Most Important Thing to Remember*

Before you get started or proceed with editing, you must do one more thing. In addition to saving your project and all the files associated with it to a Home Directory, you also need to set your System Settings so that Final Cut Pro knows exactly where to store automated file information. After reading this, you may think it is a bit tedious or unnecessary, but we assure you that it is **absolutely essential** that you follow these guidelines in order to avoid major problems with your video project.

Immediately after opening Final Cut Pro, select "Final Cut Pro" in your toolbar. Then choose "System Settings." A window will pop up. All you need to worry about is the far left tab called "Scratch Disks." You need to set all **four** of the available options to the same folder. "Video Capture," "Audio Capture," "Video Render," and "Audio Render" all link from the first line. Then individually set your "Waveform Cache," "Thumbnail Cache," and "Autosave Vault."



This is also a good place to set or unset the "Limit Capture Now" option (the final line in the "Scratch Disks" tab.) This refers to the amount of time Final Cut Pro will import your footage during Log and Capture. Importing footage occurs in real time, so you may not want to pay close attention if your video is longer than a few minutes. Setting the "Limit Capture Now" will set a timeframe for Log and Capture – anywhere from 1 to 240 minutes. Setting the timeframe will prevent Final Cut Pro from importing unnecessary footage – and thus taking up precious hard drive space. For example, if you have a 1-hour tape, you can set the limit to 64 minutes (60 minutes plus 4 additional minutes to be safe), begin the Capture Now process (in Log and Capture), and then leave and return several hours later. Instead of capturing until your scratch disk is filled, Final Cut Pro stops capturing after 64 minutes.

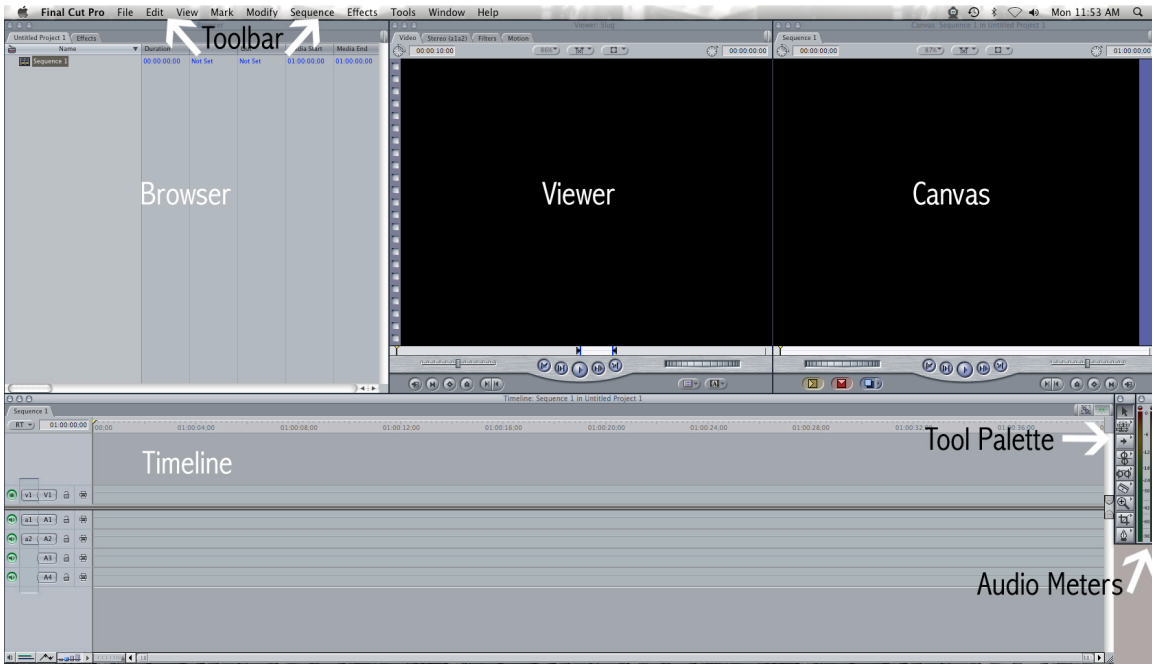
Familiarizing yourself with the Final Cut Pro Workspace

Before you begin actual work on your project, you will find it useful to familiarize yourself with the work environment of Final Cut Pro. This section will help you to get a basic feel for what you see on your screen.

When you open a new Project in Final Cut Pro, your screen should look like the image below. If it looks substantially different, from the toolbar, select "Window" → "Arrange" → "Standard." (There are a few other options for window arrangement. Test these out as you like." You can use this command at any time to revert the windows to any of the listed arrangement.

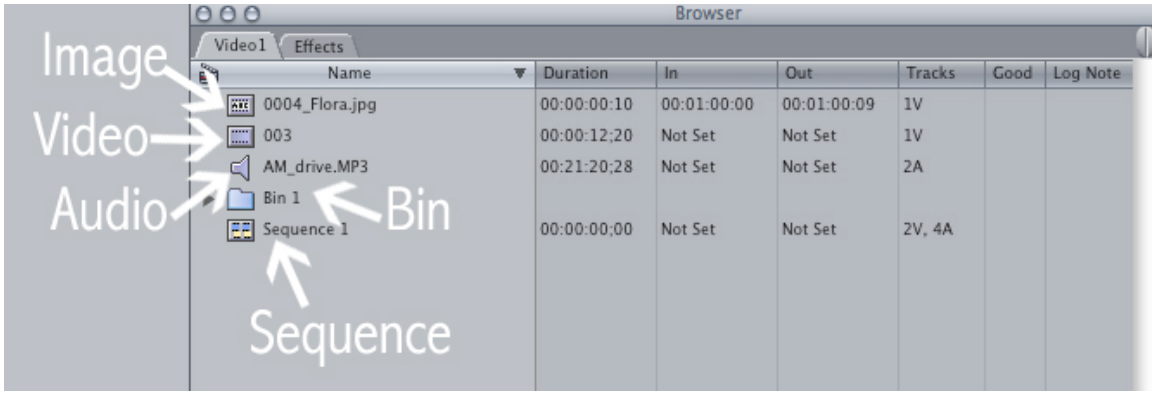
Based on their arrangements in "Standard," each of the windows is described briefly below.

The Windows in Standard Arrangement



Browser Window

The Browser window is located in the upper left corner. The Browser contains all the media, Sequences, and Bins for your Final Cut Pro project. After you set your System Settings and save your project with a name, the other tab should be labeled with the name of your project. This tab is where you can gain quick access to your video and audio files as well as your Sequences.



Viewer Window

The Viewer window is used to preview and edit individual Clips from the Browser. Make imaging and sound edits to Clips in the Viewer. To change Effects that you have already added to a Clip (*see pages 15 – 18 for video effects, 22 – 23 for audio effects*) look under the "Filter" tab. To change the image location, opacity, scale, etc. look under the "Motion" tab.

Double-click on a clip in the Browser to make it appear in the Viewer. Make sure that you have selected the Clip you want to edit by checking the "Video" tab in the upper left corner. The Viewer and to the Canvas do not necessarily display the same footage. If you want to see the changes you are making in the Viewer, set the Playhead in the Timeline to the same place as your selected clip.

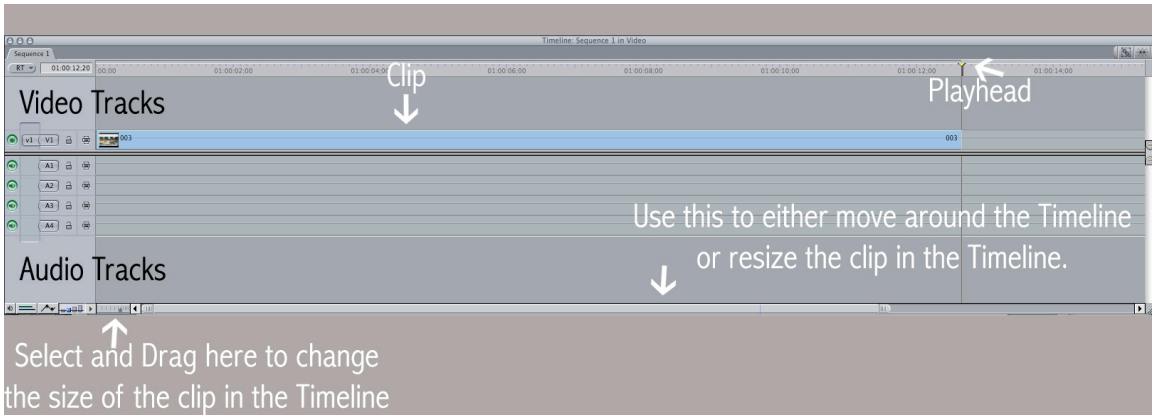
Canvas Window

When you play your Timeline, it plays in the Canvas window. You cannot edit video or audio in the Canvas window.

Toolbar

Use the toolbar to locate all editing functions for Final Cut Pro.

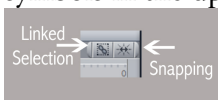
Timeline Window


Clip
Playhead
Video Tracks
Use this to either move around the Timeline
or resize the clip in the Timeline.
Audio Tracks
Select and Drag here to change
the size of the clip in the Timeline

The Timeline displays a chronological view of an open Sequence. A Sequence is what Final Cut Pro calls the compilation of edits for your project in one Timeline. Each Sequence has its own tab in the Timeline. Notice that your Timeline says "Sequence 1." If you would like to title the Sequence, double-click "Sequence 1" in the Browser and enter a name. To add new Sequences, either select, from the toolbar, "File" → "New" → "Sequence" or Control-click the Browser and select "New Sequence." (Use these same processes to add new Bins.)

You can use the Timeline to edit and arrange a Sequence. The order of the tracks in the Timeline determines the layering order when you combine multiple tracks of video. Changes you make to a Sequence in the Timeline are seen when you play back that sequence in the Canvas. If you modify clips in the Canvas, those changes can be seen in the Timeline. The Timeline is divided in two. The top half displays Video files; the bottom half displays Audio files.

Familiarize yourself with the two symbols in the upper right corner of the Timeline.



When either function is active, it turns green. Activate by clicking the icon once. "Linked Selection" sutures the video and audio files in your timeline. In other words, when you move the video file, the audio file follows – and vice versa. When you want to delete either the video or audio portion of a Clip, it is important that "Linked Selection" is off. "Snapping" enables more precise Clip movement in your Timeline. Test it out by moving clips around on your timeline and see the difference.

Tool Palette

This window contains various tools that you can use to edit your project. The most helpful and commonly used tools are the "Selection tool" – an arrow, the "Razor Blade tool" – a razorblade, and the "Zoom tool" – a magnifying glass. Select these by clicking them once, or using their keyboard shortcuts when nothing else in your project is selected. (To learn more keyboard shortcuts for the tool palette, rest your mouse over the tool's icon. A yellow window will appear giving the tool's name and shortcut.)

Final Cut Pro defaults to the "Selection tool" (keyboard shortcut "a"), which is used to select Clips. To select more than one Clip at a time, hold the shift key while selecting.

Use the "Razor Blade tool" (keyboard shortcut "b") to cut your Clips.

Notice that the "Razor Blade tool" has a tiny arrow in the upper right corner of its icon. This indicates that there are more options within the tool. To access these, either click the icon and hold the mouse down for a second or press the Command key while clicking the icon. The double razor blade icon signifies the "Razor Blade all tool" (keyboard shortcut "bb"). Use this when you want to cut Clips that rest in several tracks on your Timeline.

The "Zoom tool" (keyboard shortcut "z") to zoom in or out. Final Cut Pro defaults the "Zoom tool" to in, but if you press the Option key while holding down the mouse. You can also access the zoom out by Command-clicking the "Zoom tool" in the Tool Palette. You

will also see a hand icon. This is useful for looking quickly through your timeline. The keyboard shortcut for the "Hand tool" is "h."

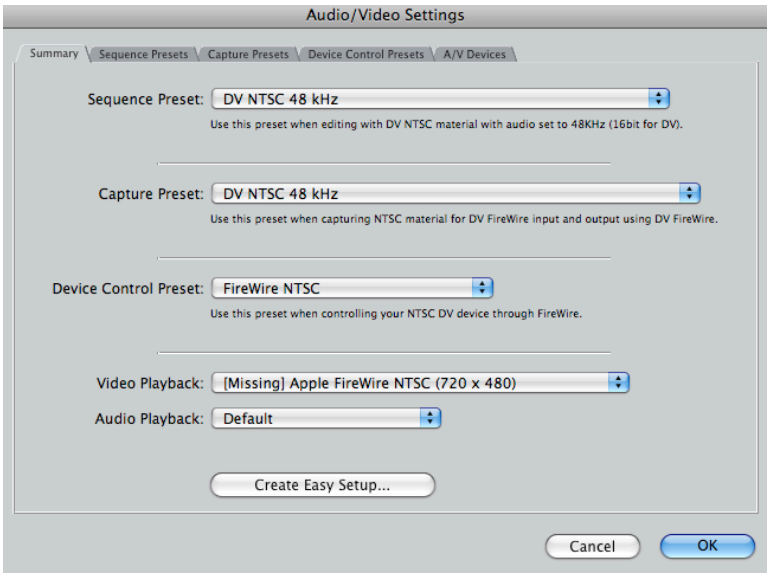
Audio Meters

Use this window to monitor the level of your audio output. If nothing happens in these meters when you play your video it means that you either do not have an audio track, or your audio is too quiet. If the dark red circle turns bright red, your audio is too loud. Edit audio clips in the Viewer like you would a video clip.

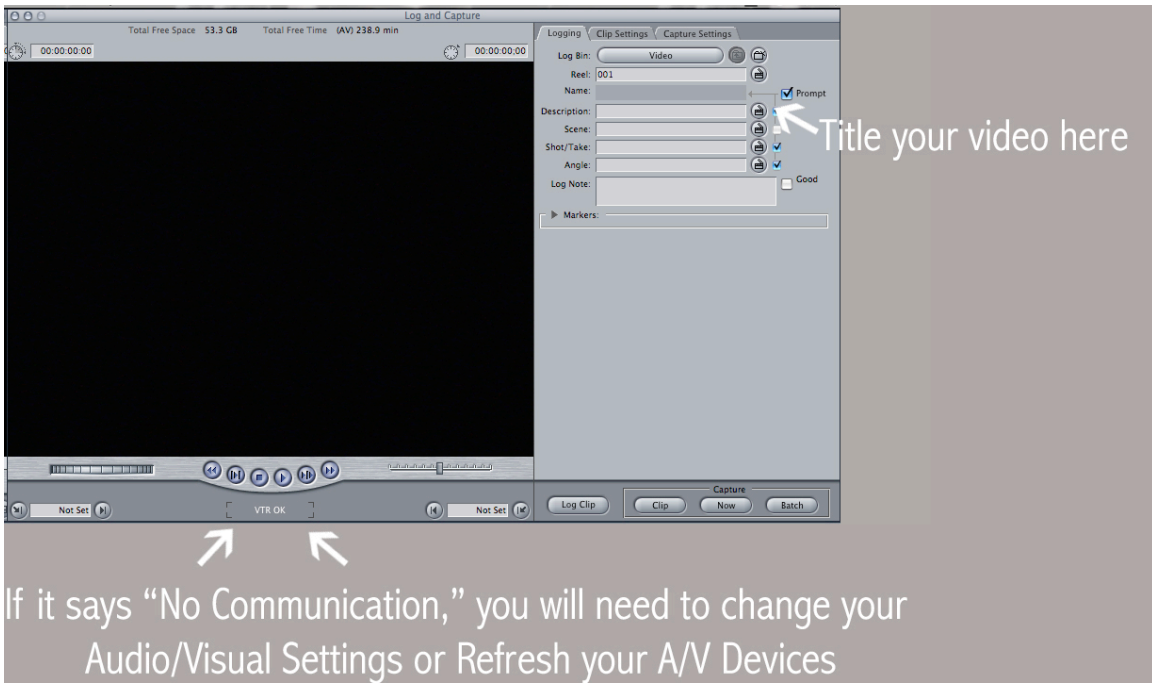
Log and Capture

Log and Capture is used to import video or audio from a non-computer source, such as VHS, mini-DV, DVD, live stream, or an Audio Cassette. (In other words, use this to get the video you have shot on camera onto the computer.) First, make sure that you have set your System Settings properly. Next, turn your device on or, if importing from a camera, that it is both on and set to the "Playback" mode. Then, find the Log and Capture function from the toolbar: Select "File" → "Log and Capture." This will open the Log and Capture window, which should look like the image below.

If you get a warning that says "Unable to initialize video deck. You may still log offline clips or use Capture Now," but you have a deck/device properly connected, you need to help the computer locate the deck. First try: (from the toolbar) "View" → "Refresh A/V Devices." If this does not work, you need to reset your A/V devices. From the toolbar: "Final Cut Pro" → "Audio/Visual Settings" Under "Device Control Preset" select "FireWire NTSC." If you are importing from a VHS deck or other Analog Device, select "Non-Controllable Device."


Audio/Video Settings
Summary
Sequence Presets
Capture Presets
Device Control Presets
A/V Devices
Sequence Preset:
DV NTSC 48 kHz
Use this preset when editing with DV NTSC material with audio set to 48KHz (16bit for DV).
Capture Preset:
DV NTSC 48 kHz
Use this preset when capturing NTSC material for DV FireWire input and output using DV FireWire.
Device Control Preset:
FireWire NTSC
Use this preset when controlling your NTSC DV device through FireWire.
Video Playback:
[Missing] Apple FireWire NTSC (720 x 480)
Audio Playback:
Default
Create Easy Setup...
Cancel
OK

Within Log and Capture, you can title the media you are importing from the "Logging" tab. Name the media within the "Description" line. You can get even more specific by labeling "Scene," "Shot/Take," "Angle," and "Log Note."



After your clip is labeled, press "Play" on your device or in the Log and Capture window. Then click the "Now" button on the bottom right of the Log and Capture window. A new window will open and Final Cut Pro will begin to capture the media. Because capture is in real-time, if you shot 2 hours of footage, you need to wait 2 hours for the capture to complete.

While capturing, it is a good idea to leave the computer alone. In other words, do not surf the Internet, or use a program that uses the computer's graphics card (Photoshop. Dreamweaver, Flash, etc.).

You can either wait around for your media to capture, or you can return to the computer when you think it has finished importing your media. You can also set the Limit Capture Now, as described in the Glossary to this booklet.

When the clip you want has finished, stop capturing by hitting the Esc key. Final Cut Pro will automatically save the clip you just captured into the Browser. Final Cut Pro also keeps a copy of your original captured media in your Home Directory's "Capture Scratch" folder. If you ever cannot find the original media, you can look through this folder. Here is where naming your logged clips comes in handy.

Usable Formats

Final Cut Pro can import the following formats:

Video files:
QuickTime Movie, AVI, DV, HDV.

Audio files:
AIFF/AIFC, WAVE. (You can convert mp3's to make them compatible in iTunes or Quicktime. *To prevent this extra step, follow the guidelines for importing CDs through iTunes on pages 25 & 26.*)

Graphics and still images:
BMP, FlashPix, GIF, JPEG/JFIF, MacPaint (PNTG), Photoshop (layered), PICS, PICT, PNG, QuickTime Image File, SGI, TARGA (TGA), and TIFF.

Importing Video: From pre-existing files.

You can **import video files** into Final Cut Pro in a number of ways. **But, always be certain that you first save the file to your Home Directory so that it is always stored in your project correctly.** You can drag your clip into the Browser from your Home Directory. (The easiest way is to open a Finder window, navigate to your Home Directory, drag and drop into Final Cut Pro.) You may also import from within the program: From the toolbar "File" → "Import" → "Files." You can select several files at a time, but if you have a whole folder to import, you can select "File" → "Import" → "Folder." You might also try this shortcut: Control-click your mouse in the Browser and select "Import" from the window that pops up. If you are organizing media into Bins in the Browser, you can Control-click the Bin and import directly into the bin.

Importing Video: From VHS, mini-DV, DVD, or live stream.

If you need to get video from a VHS, mini-DV, DVD or live stream use "Log and Capture" (*see pages 10 – 11 to learn about Log and Capture*). **Be sure to double check that your System Settings are properly set before you initialize Log and Capture.**

Importing Audio: From pre-existing files.

Import audio in the same way that you import video. **Again: always be certain that you first save the file to your Home Directory so that it is always stored in your project correctly.**

To import music from a CD, it is easiest to use iTunes (*see pages 25 – 26 for iTunes instructions*) to import the audio and reformat it appropriately. Once you have the audio file, move it into your project folder. Then drag it into the Final Cut Pro Browser or import it using an "Import" command.

Importing Audio: From VHS, mini-DV, DVD, live stream or Audio Cassette.

If you need to get audio from a VHS, mini-DV, DVD, live stream or Audio Cassette use "Log and Capture" (*see pages 10 – 11 to learn about Log and Capture*). Be **sure to double check that your System Settings are properly set before you initialize Log and Capture.**

Editing and Assembling Your Video

Editing Video with In and Out Points / Editing Video Directly in the Timeline / Adding Tracks / Locking Tracks / Adding Effects / Using Video Generators: Text & Slugs / Rendering / Keyframing / Editing Audio Directly in the Timeline / Editing Audio with the Viewer / Voice Over / Using Audio Transitions & Effects / Working with Sequences

Once you have your audio and video clips imported into Final Cut Pro, you are ready to begin editing them and assembling them into a cohesive project.

In this section, you will learn the two basic ways to edit your media files into clips.

The first (Editing in the Viewer) is less visually minded. The second (Editing Directly in the Timeline) is much more visual.

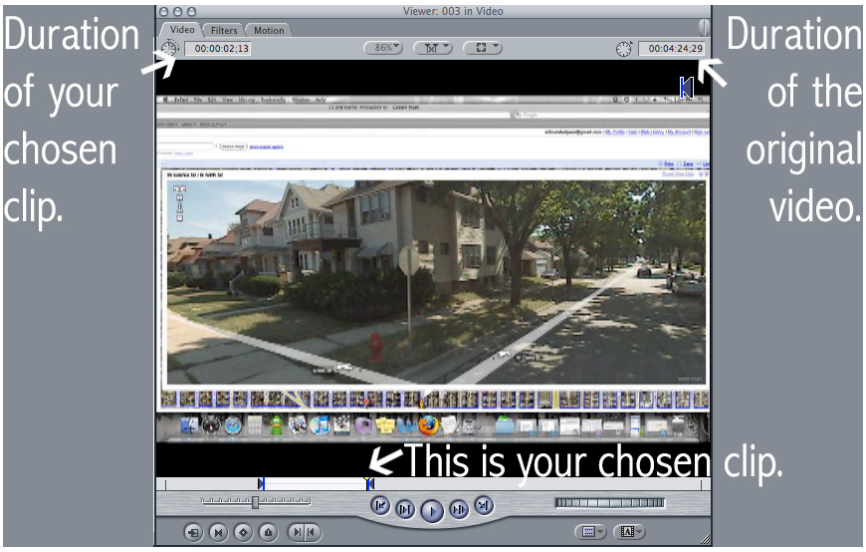
Editing Video in the Viewer

Here is the basic order of operations:

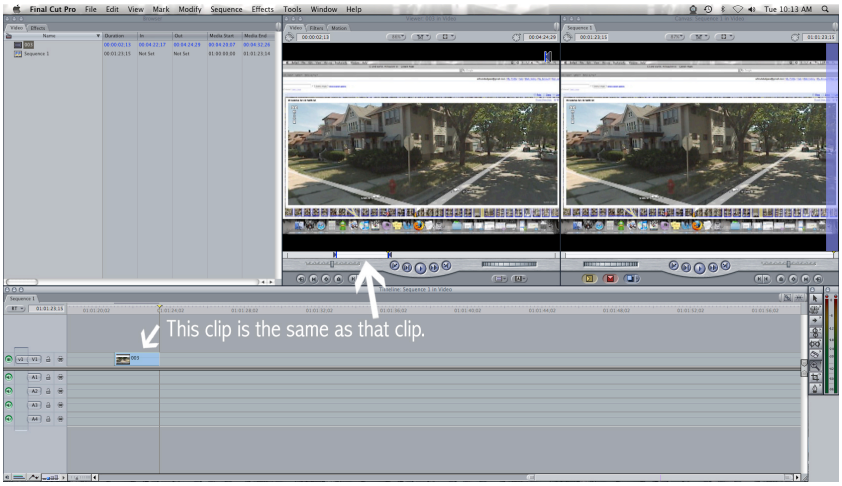
1. Double-click on the media file in the Browser.
2. This will cause the media to appear in the Viewer.
3. Edit the Clip in the Viewer using In and Out Points.
4. Drag the Clip from the Viewer into the Timeline.
5. Use the Canvas to view your video from the Timeline.

When editing in the Viewer, you need to set In and Out Points. In and Out Points define at what point you want a Clip to start and at what point you want a Clip to end. To set In and Out Points for a Clip, first get the Clip into the Viewer by double-clicking on the Clip in the Browser. Your Clip should appear in the Viewer, and you can watch it using the "Play" button.

Now, move the Playhead to where you want the Clip to start. Click on the “In” button or press the "i" key. You will see the "In" marker move to where the playhead is. Now move the Playhead to where you want your video to end. Click on the “Out” button or press the "o" key. The "Out" marker should move to where the Playhead is.



Now, click on the Viewer and drag your clip onto the Timeline. Notice that what has been placed onto the Timeline is only the area in between the "In" and "Out" markers.



You can drag the clips in the Timeline to rearrange them. Note that the top half of the Timeline is your video track and the bottom half of the Timeline displays your audio tracks.

To watch the edits you have made, place the Playhead at the beginning of your Clip and press the space bar. It will now play in the Canvas.

Setting In and Out points does not permanently change your media. This means that you can create clips in the Viewer by setting In and Out points and dragging them into the

Timeline ad infinitum. Thus, you can use multiple clips of the same imported video or audio file in the same Sequence or Timeline.

Editing Video Directly in the Timeline

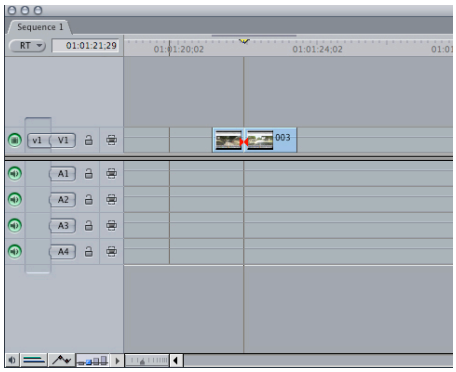
Here is the basic order of operations:

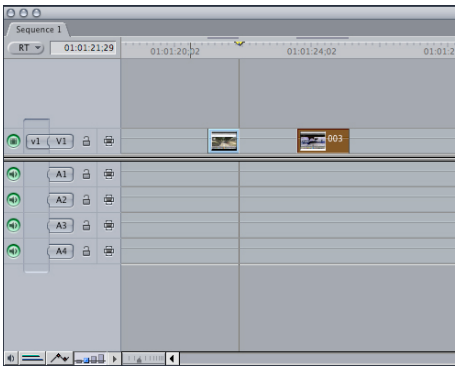
1. Double-click on the media file in the Browser and drag it into your Timeline.
2. Your media will appear in the Viewer.
3. Edit the Clip in the Timeline using the "Razor tool"and the Playhead.
4. Arrange your Clip or Clips as you like in the Timeline.
5. Use the Canvas to view your video from the Timeline.

When editing directly in the Timeline, you start with a copy of your original media file. Your Timeline will be as long, in terms of time, as the original file.

Double-click the media file in the Browser and drag it into your Timeline. Your Playhead will move to the end of the file. Navigate through your media by either dragging the Playhead along the top of the Timeline, dragging the bars at the bottom left of the Timeline (*see page 7 for an illustration*), or using the "Zoom" or "Hand" tools (*see pages 8 – 9 for tool palette information*).

Once you have found a place you want to cut material out, find the "Razor tool" in the Tool Palette. Click the file with the "Razor tool." (If you are working with Captured material, you may want to get rid of excess material first.) It will make a divide in the original file: aka a Clip. Now you can move the two Clips independently.

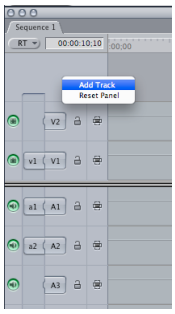




Arrange your Clips on your Timeline. Move the Playhead to the beginning of your edited material and press the space bar to view the video in the Canvas (or listen to the audio.)

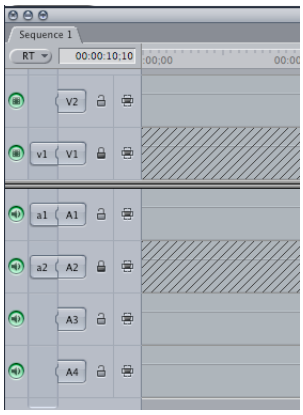
Adding Tracks

It is very easy to add tracks to your Timeline. Adding more tracks enables visual or aural layering. To add a track, simply Control-click in the panel and select "Add Track." Click in the Video half to add video tracks, the Audio half to add audio tracks.



Locking Tracks

When editing, you may want to keep some tracks “as is” and move others around. Final Cut Pro allows you to lock both Video and Audio tracks. Simply click the lock icon in the panel. To unlock, click it again. Locked tracks have hash marks through them.



Adding Video Effects

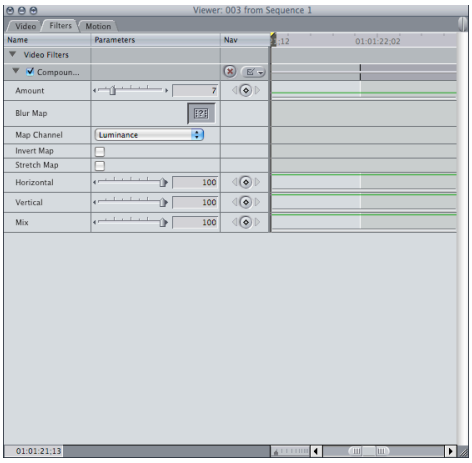
Final Cut Pro's video Effects include filters and transitions. Effects can be found under the "Effects" tab in the Browser or along the toolbar. Note that there are a number of folders, each one containing a number of different effects. You will also see Audio Effects here, but for now, we will focus on the Video Effects folders: Video Transitions and Video Filters. *See pages 25 – 27 to learn about Audio Effects.*

- **Video Filters** apply to an entire clip; they range from very subtle (such as "Color Correction" effects) to extreme (such as the "Blur" effects).
- **Video Transitions** provide different ways to transition from one clip to another.

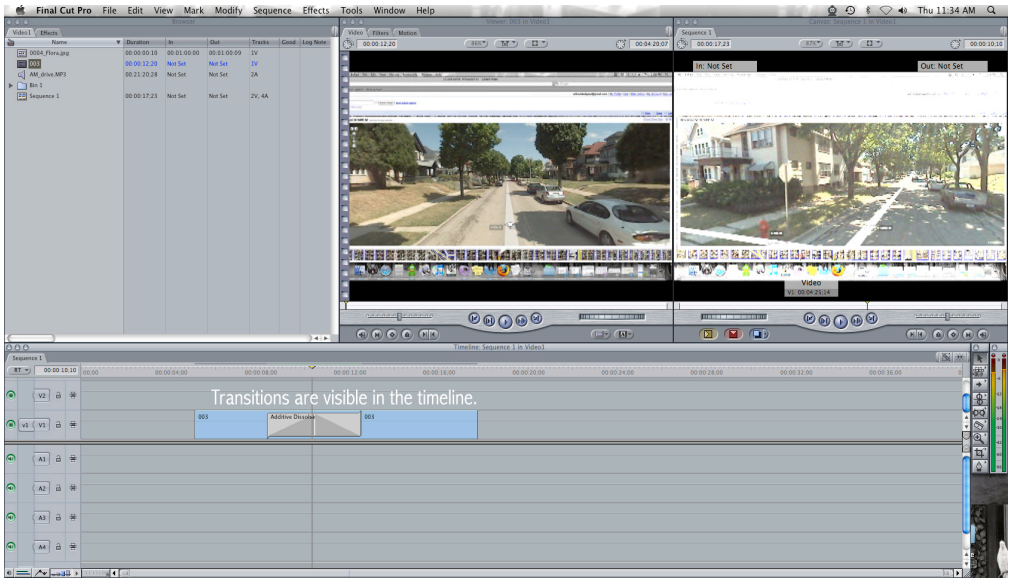
Also included when Effects is tabbed in the Browser, but not necessarily an Effect:

- **Video Generators** create such things as color bars, slugs and text. (These are also located in the lower right corner of the Viewer by selecting the “A” icon.)

When you select an Effect (from either the tab or the toolbar), first have the Clip you wish to affect selected and active in the Viewer (in other words, double click it!). Then, choose your Effect and drag it over to the Viewer of your selected clip. In most cases, the Effect will now be located in the "Filters" tab of the Viewer. Adjust the parameters for the Effect to your liking. Every Effect is different; the best way to learn them is to experiment. Make sure that the Playhead is also over the Clip you are effecting so that you can see what the Effect is doing.



Transitions are a bit different in that they need to be dragged to the Timeline in between two Clips or a Clip and a Slug. Transitions are actually visible on the Timeline. You can change the length of the transition by dragging from its start or beginning.



Using Video Generators: Text and Slugs

Use Video Generators to create Titles, Slugs, Color Mattes, and Color Bars. Generators create their own Clip, so you will set timing parameters to them.

Titles are text that appears over the top of a video clip. There are a few different types of Titles available through Final Cut Pro (for more ambitious Titles, try the program LiveType). "Text" is the most straightforward, but "Scrolling Text," and "Crawl" are also quite common.

From the Browser or the Viewer, find the "Text" folder. Once you have selected a text generator, double-click it and it will appear in the Viewer. Now, select the "Controls" tab to insert text, and choose a font. For greater manipulation of the text, choose the "Motion" tab.

Final Cut Pro does not handle text very well – and even though there are many options for fonts, relatively few will actually look good on screen.

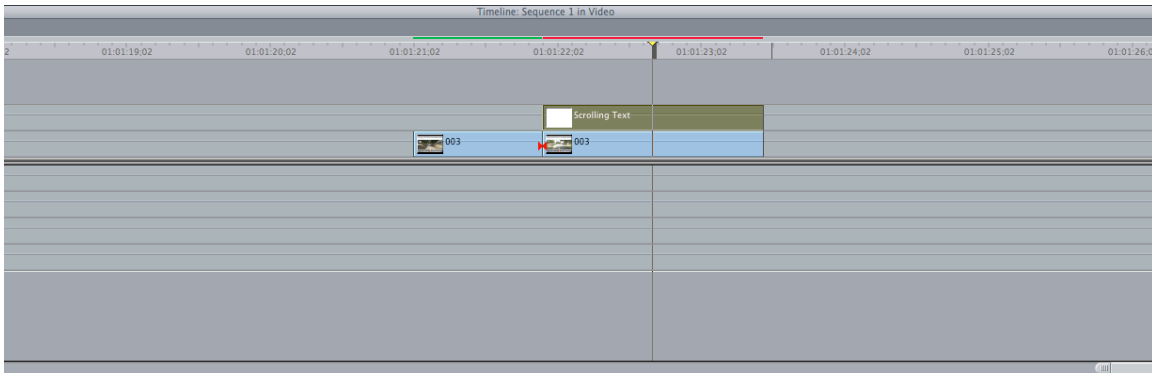
Tips on Optimizing Text for Titles

- Avoid fonts that are thin or smaller than 25 point.
- Use only sans serif fonts, such as:
  - Arial
  - Futura
  - Gill Sans
  - Helvetica
  - Impact
- Use the bold font style.
- Do not use white or black as a font color.
- Reduce the opacity of the text clip to 90 percent. (Look in the "Motion" tab in the "Viewer" for this.)

You may also want to make Slugs with the Video Generator. Slugs are"filler" video and audio clips with no image and no sound. Slugs are useful to preserve time in your Sequence for future material. Also slugs are necessary to add transitions to black. They are generated by selecting the "A" icon in the lower right corner of the Viewer: You can adjust the timing of the Slug in the upper left corner of the Viewer. Drag and drop the Slug into your Timeline.

Rendering

You may have noticed that when you insert or apply a Video Filter, Transition, or Generator there is often a red or a green line that appears in the Timeline. When this red line is present, you cannot watch that part of your project. That is because you need to Render your effect.



Rendering is the procedure that Final Cut Pro must execute for processes that cannot be completed in real time before they can be viewed; if a Sequence needs Rendering, there will be a red line at the top of the Timeline and you will not be able to view the project until the sequence has been rendered. When there is a green line above the clip you can still watch or listen to the Clip, but you will need to render the clip to optimize the image and sound quality. To Render, select the portion that needs rendering (unless you want to render your entire Sequence, in which case nothing needs to be selected) select "Sequence" → "Render In to Out" or "Render All" or "Render Selected."

Depending on the length and complexity of your effect, this may take quite a while.

Keyframing

Keyframes are definitely one of the best ways for you to control changes in your Final Cut Pro project, so try them out! Keyframes are a special-purpose control that denotes a change in value in a filter or motion parameter. When two Keyframes with different values are set in Final Cut Pro, a transition from one value to another is calculated, resulting in a dynamic change to that parameter. For example, Keyframes can be set to create fade-in or fade-out in video. Similarly, Keyframes may be used in audio files to create fades. The easiest way to set keyframes is in the Viewer: look under the "Motion" tab for Video or the "Stereo" tab for Audio. Audio keyframes can also be set in the Timeline using the "Toggle Clips Overlay" and "Pen tool" buttons. *See pages 8 – 9 for tool palette information.*

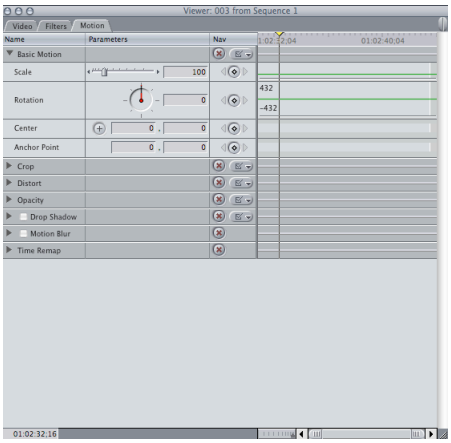
Keyframes are small diamond shaped buttons.

When unactive, keyframes look like this:

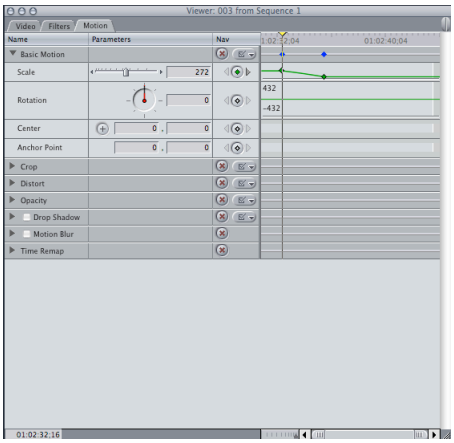
When active, keyframes look like this:

You don't need to use Keyframes if you want a CONSTANT change. In that case, just set the scale, Effect, etc. to a specific number. Keyframes designate points where you want a CHANGING Effect, motion, scale, position, audio level etc. to begin. When you set a Keyframe, set a second Keyframe at another point in time to designate its end point.

An example of unselected Keyframes in a Video file:



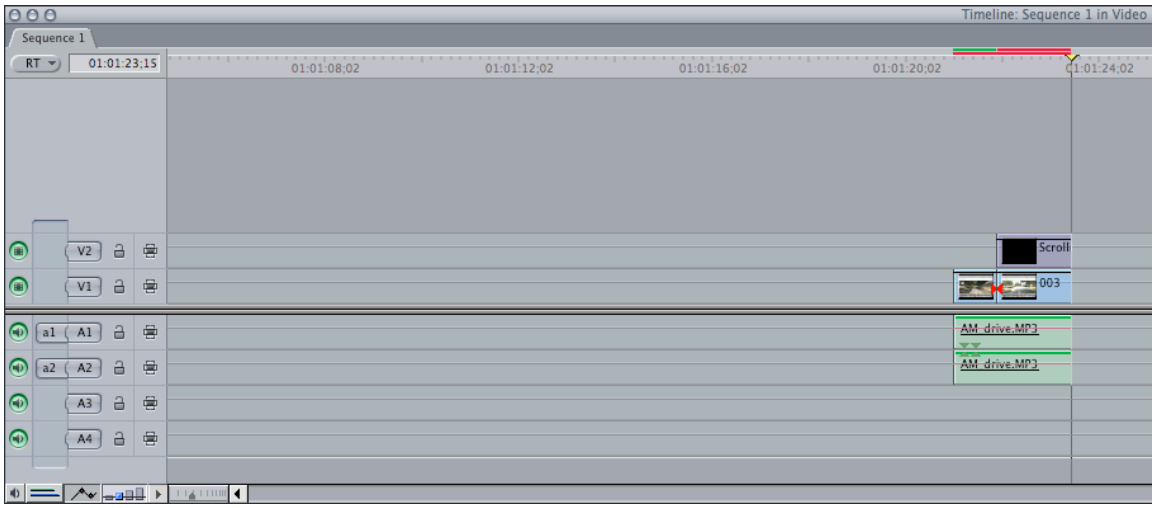
Now selected, and with two Keyframes. Notice the transition (the green line between them):



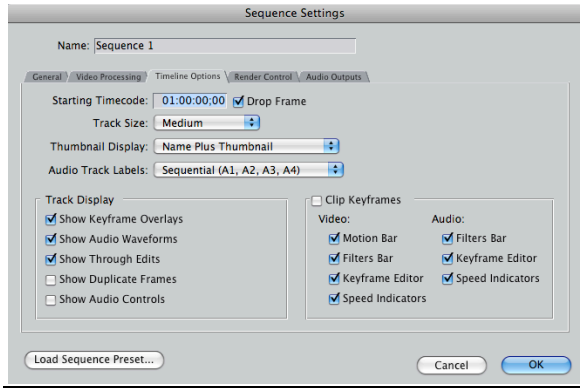
Editing Audio Directly in the Timeline

Now that you are familiar with how to work with video in the Timeline, we can quickly go over audio. If the only audio that you want to use is the audio that is connected to your video, there is nothing special that you have to do – it should automatically be attached to your video clip. If you want to add music or sound effects, save them to your Home Directory and import them into the Browser (*see pages 11 – 12 for Importing information*).Then, from the Browser, drag the audio clips to the bottom half of the Timeline. It is much easier to adjust audio by editing the directly in the Timeline than using In and Out points from the Viewer.

Once your audio files are in the Timeline, locate the "Toggle Clip Overlays" icon in the lower left corner. Once you select this, overlay lines will appear on both your audio and video files in the Timeline.The overlay lines will be pink for audio and black for video.



Next, turn on the waveforms for the audio. From the toolbar, select "Sequence" → "Settings." A window will pop up. Select the "Timeline" tab and check the box next to "Show Audio Waveforms."

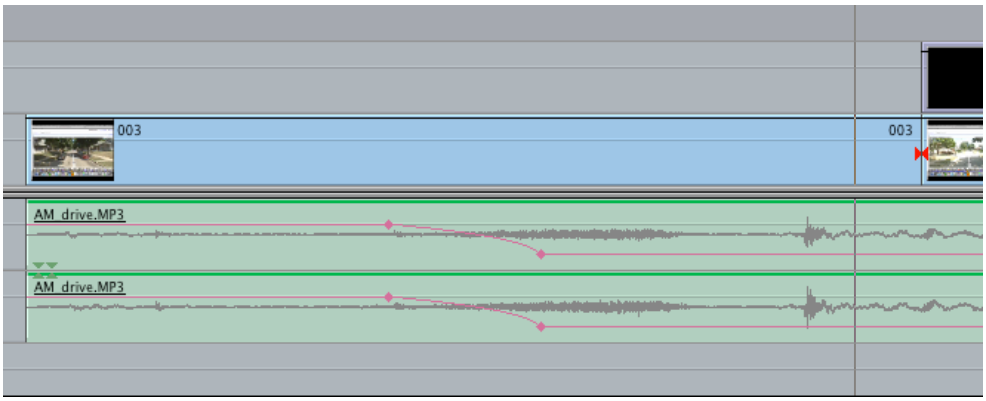


Your audio track will now display both the pink overlay line and the waveforms. Zoom into the track to get a closer look.

Rest the tip of your cursor on the pink overlay line. The pointer will turn a double arrow: . Click the mouse and, while holding, drag the pink line up or down. This will move the will raise or lower your audio volume. As you do this, a window will show the amount of increase or decrease of your volume in decibals (dBs). When you first click you will see that 0 shows in the small box. This is the starting or reference point for the audio of this clip. Your changes will show as + or - dBs. The maximum increase will be + 12 dBs. - 60 dBs will be no audio. If you wish to return to your original volume setting click on the overlay line and drag until the little box shows 0. The changes that you make this way will effect the volume of the entire clip. If you are working with a stereo pair, any change you make to one channel will affect the other. If you are working with two mono tracks, you will need to repeat the same level changes to the second track.

You may also change the audio levels in only one part of the Clip. To do this, you will mark Keyframes on the pink overlay. From the tool palette click on the pen icon; this activates the "Pen tool" (keyboard shortcut "p"). Select the part of the line where you want to add a Keyframe.

When setting Keyframes, set one that "saves" the original audio volume. Then set another for a new audio volume. If there is any space in between your Keyframes, Final Cut Pro will create a transition between them.



Once you have set your Keyframes you can move them left or right with your mouse. To remove a Keyframe, either press Control while selecting it with the "Pen tool" or hold down the Option key while selecting with the "Pen tool."

You can also use this technique to fade your audio up or down at the start or end of a Clip. In video, this technique will affect the opacity of the image. Use this technique for fading in or fading out image.

See pages 15 – 16 for instructions on adding tracks and locking tracks.

Editing Audio in the Viewer

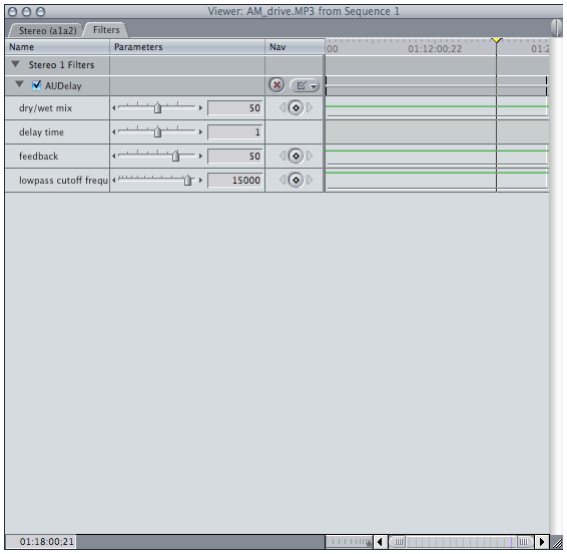
Everything that has been outlined here can be done in the Viewer, where very precise work may be done. Try a different Window layout if you choose to edit audio this way. From the toolbar, select "Window" → "Arrange" → "Two Up."

Using Audio Transitions & Effects

Just like with video, there are a number of Effects offered by Final Cut Pro that can be applied to your audio. These can be applied in the same way that video effects are applied; just drag the effect from the Browser window onto the audio track. Double-clicking the effect lets you adjust the parameters in the Viewer.

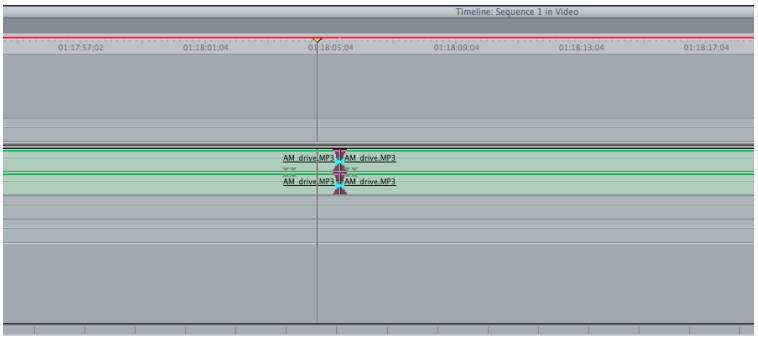
- **Audio Filters** remove certain parts of the sound spectrum and can be used to try and reduce background noise. There are also some that can be used for more dramatic effects ("delay" for example).
- **Audio Transitions** can be used to create smooth audio transitions between Clips.

When you select an Effect (from either the tab or the toolbar), first have the Clip you wish to affect selected and active in the Viewer (in other words, double click it!). Then, choose your Effect and drag it over to the Viewer of your selected clip. In most cases, the Effect will now be located in the "Filters" tab of the Viewer. Adjust the parameters for the Effect to your liking. Every Effect is different; the best way to learn them is to experiment. Make sure that the Playhead is also over the Clip you are effecting so that you can see what the Effect is doing.

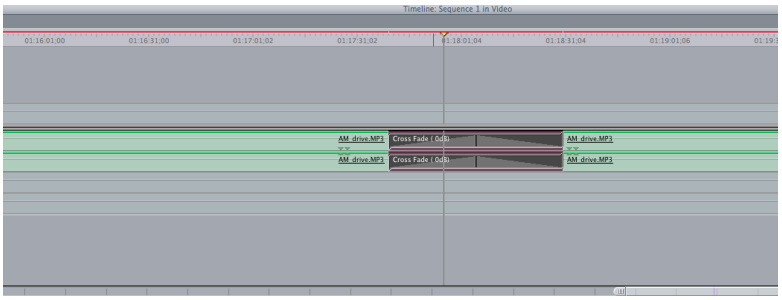


Transitions are a bit different in that they need to be dragged to the Timeline in between two Clips or a Clip and a Slug. *See pages 16 – 18 for Slug information*. Transitions are actually visible on the Timeline. The only Audio Transition available in Final Cut Pro is "Cross Fade (0dB)" or "Cross Fade (+3dB)" → the difference being the volume of the fade. To add a Cross Fade, select the junction between two audio Clips or a Clip and a Slug. Then drag and drop the Cross Fade onto that space. It is easiest to work with Cross Fades if you are zoomed into the Clips. Use the "Zoom tool" or the bar on the bottom of the Timeline. **Note: You can make Cross Fades using the Audio Editing technique detailed on pages 23 – 24.**

Select the Junction between two Clips:



Add the Transition:



Unlike Video Transitions, you can only tweek the timing of a Cross Fade. Either drag the Cross Fade in the Timeline from its start or end or double click the Cross Fade and enter a duration.

You will need to Render after adding an Effect, as well. *See page 21 for Rendering information.* To Render, select the portion that needs rendering (unless you want to render your entire Sequence, in which case nothing needs to be selected) select "Sequence" → "Render In to Out" or "Render All" or "Render Selected."

Working with Sequences

If you are working on a complicated or lengthy project, you may consider working with Sequences. By adding new Sequences (*see pages 6 – 7 for Sequence information*) you create separate editing areas in the Timeline. This is helpful if you want to try new types of edits, but want to keep an original idea, or if you want to work on different places (or scenes) in your project. It is a good idea to name your Sequences.

Don't worry, If you want to combine you different sequences in the end, just copy and paste like you would in a word processing document.

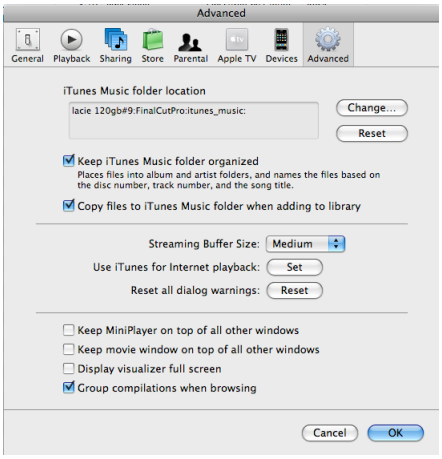
In addition, Final Cut Pro allows you to "nest" Sequences. In other words, every Sequence listed in your Browser may be dragged and dropped into a new Sequence. It is then treated as a complete file (like all your Imported and/or Log and Captured material).

Using iTunes to Import Music to Final Cut Pro

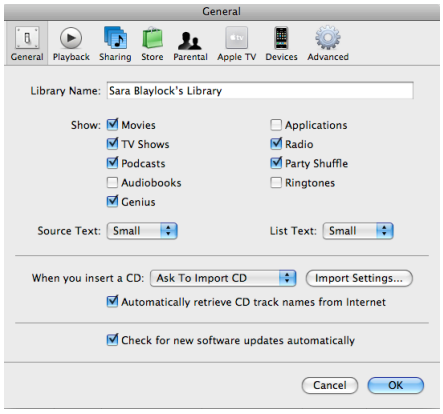
If you want to get music off a CD so you can add it to your Final Cut Pro project, or if you want to simply make a copy of that CD, you need to first get the music off the CD and onto the computer. **Please follow these instructions prior to importing your CD.**

Many computers set iTunes to automatically import CDs. As such, please change the following settings before inserting your CD.

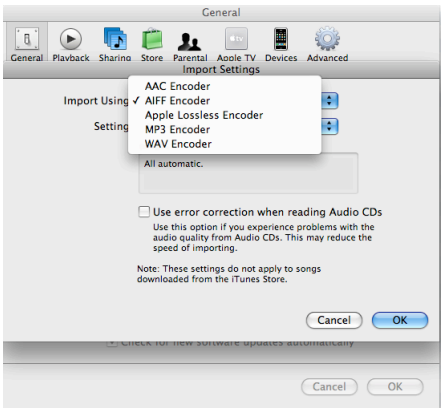
First, set iTunes to import to your Home Directory. From the Menu bar select "iTunes" → "Preferences." In the window that appears, select the "Advanced" tab. Change the iTunes library to your Home Directory. Create a new Music folder within that directory.



Second, set iTunes to display a prompt before importing a CD. From this window, select "General." Make sure it says "Ask to Import CD."

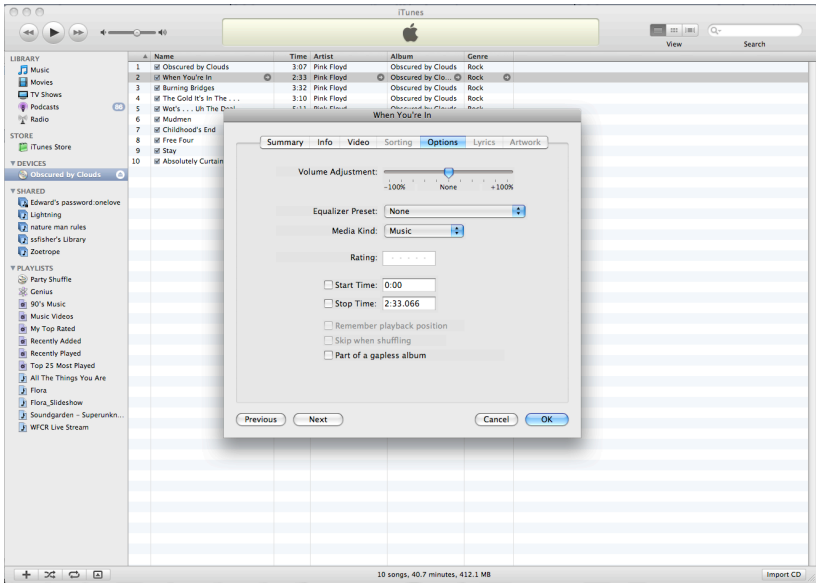


From here, you can also change the encoding settings for the audio files you want to import. Final Cut Pro can only use AIFF/AIFC or WAVE files. Select "Import Settings" (to the right of "Ask to Import CD." In the new window, select either "AIFF Encoder" or "WAV Encoder".



Now you can insert your CD. If the CD is an original or a copied original, iTunes will provide track names within a few seconds. If it is a mix CD or a copy of random audio tracks and you want track names, you will need to import names manually. Say "No" to the "Would you like to import the CD…" window prompt. Simply highlight the track, click the title once and enter your title.

If you only wish to import a few of the tracks on your CD, unselect the blue checkmark next to unwanted titles. You can also choose to import a partial track. Prior to importing, select the track and then go to "File" → "Get Info." In the window that opens, select the "Options" tab and set a Start and Stop time.



Now you can import your CD, assured that it is saving to your Home Directory and in a Final Cut Pro compatible format. Import the files as you would any other media file. *See pages 11 – 12 for Importing information.*

Finishing Your Project

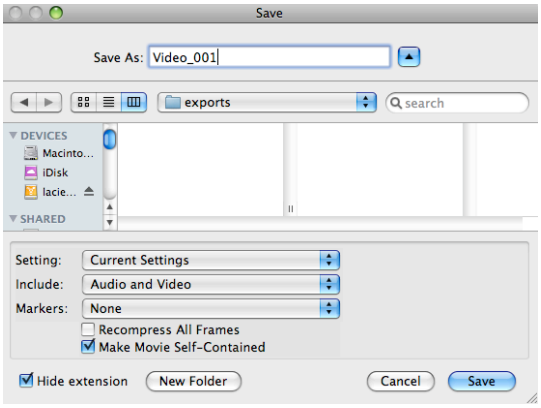
Exporting Your Movie: DVD, Computer, Internet / Recording to VHS or miniDV tape

Exporting Your Movie

In order for your Final Cut Pro project to become a movie (or audio file, as the case may be) that can be played on a computer, a DVD player, or the Internet you need to export. To export, set In and Out Points and from the toolbar select "File" → "Export." Now is when you get to decide what Codec you want to use for compression. Exporting will compress your file, so set it to the highest quality permitted for your Output device (DVD, computer, Internet). You can always work backward, but you can never add quality to a compressed file. Always export these files with unique names and to a unique "Export" folder in your Home Directory.

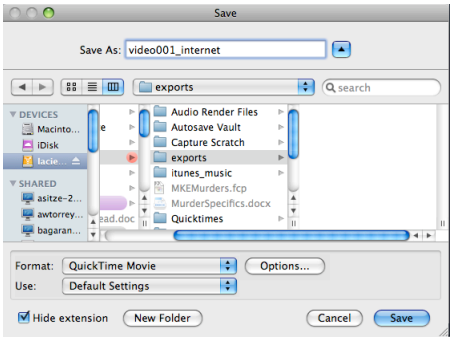
Exporting Your Movie: for DVD.

If you are exporting simply to edit within Final Cut Pro or to make a DVD, you can select "Export" → "QuickTime Movie." Make sure that the "Make Movie Self-Contained" box is selected. Exporting like this will not take as long as using a unique Codec. This is because it is leaving the Compression up to the DVD production software.

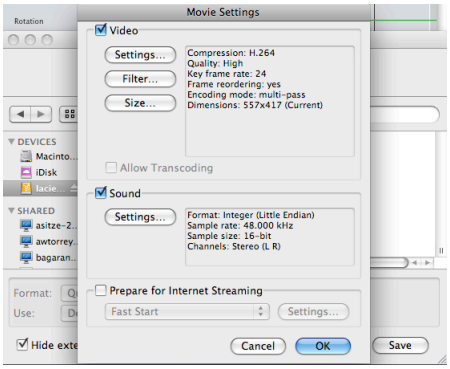


Exporting Your Movie: for Computer Playback.

When playing back on a computer, you have more control over the output size and quality. From the toolbar, choose "File" → "Export" → "using QuickTime Conversion." Select "Options" and a window with a new window appears. Select a Codec from the dropdown menu. The best quality for computer playback is "H.264." Deselect the "Prepare for Internet Streaming" box.



After selecting "Options" choose H.264.:

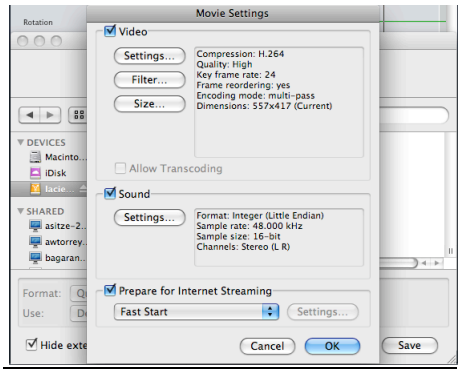


You can try out other Codecs as you learn about them online. The best way to tell if your exported file is of high quality is if it takes a long time to export. Additionally, the resulting file should be big – both in terms of memory and physically. Open it up in QuickTime Pro. If the initial window is large, you have a good sized file that you can play on a computer (or make smaller as needed). Another way to tell is by playing back in QuickTime at fullscreen. If your text is very blurry, go back to Final Cut Pro and try exporting again. **Remember, exporting takes a very long time. So plan ahead!**

Exporting Your Movie: for the Internet.

When exporting for the Internet, you will need to prepare the movie as either a QuickTime "Fast Start" or "Hinted Streaming." "Fast Start" means that the movie will start playing from a web server before the movie has completely downloaded to the user's hard disk. In other words, it will play even though it has not completely loaded. When preparing with "Hinted Streaming" you decide the data rate at which the movie will download. You probably won't use "Hinted Streaming."

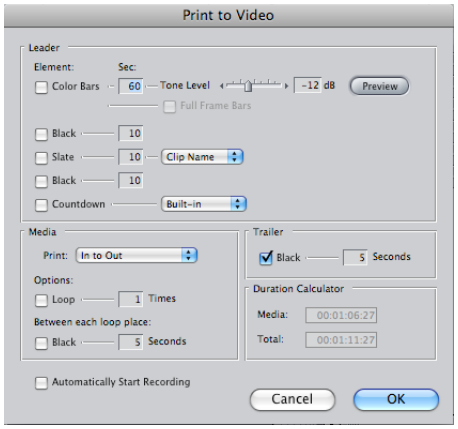
When exporting, use the H.264 Codec recommended for Computer playback. When choosing this (*see page 27 for more Codec information*) make sure the "Prepare for Internet Streaming" box is checked, and that it says "Fast Start."



Recording to VHS or miniDV tape

If you are going to export your video directly onto a VHS or miniDV tape, you can either Print to Video or Edit to Tape. Both will happen in real-time.

Print to Video offers you more options. Find this by selecting "File" in the toolbar, and then "Print to Video." Here you can choose to add a "Leader" (some bit of black, color bars, or a tone that precedes your project) or a "Trailer" (some bit of black that follows your project). There are a few other choices available, like setting looping intervals. Print to Video gives you more options than Edit to Tape.



Edit to Tape connects your Timeline directly to a VHS or mini-DV deck. You will not have the option of setting a "Leader," "Trailer," or "Color Bars." Find this by selecting "File" in the toolbar, and then "Edit to Tape." Make sure you have a VHS or mini-DV deck set up.

Final Cut Pro Glossary

Underlined items are cross-referenced in this glossary. Please also refer to the Final Cut Pro User Manual Glossary. To find this, from the toolbar select "Help" → "Final Cut Pro User Manual," then search for "Glossary."

A

B

- **Batch Capture:** an automated capture of clips that are logged using the Log and Capture function.
- **Bin:** located in your Browser window, use bins like folders to organize your media. You can have as many bins as you like. You may name and add bins in the Browser. There are two ways to add ne bins: from the toolbar, select "File" → "New" → "Sequence" or Command-Click in the Browser and select "New Sequence."You can import specific files to specific bins. For example, import all your audio files into one Bin and call it "Audio." This is useful when you use a lot of different media for your Project.
- **Browser:** The Browser contains all the media, Sequences, and Bins for your Final Cut Pro project.

C

- **Canvas:** The canvas is a viewer connected to your Timeline. It displays where the Playhead is set. Compare this with the Viewer.
- **Capturing:** In order to use DV tapes, VHS, DVD, or live footage, you need to capture them into your project. This differs from import in that you must capture in real time, and with a tape deck, dvd deck, camera, etc connected to your computer. Because capture is in real-time, if you shot 2 hours of footage, you need to wait 2 hours for the capture to complete. Capture takes place in Log and Capture.
- **Clip:** a portion of an audio or video file that you are editing.
- **Codec:** The name "codec" is short for "coder-decoder," which is pretty much what a codec does. Most audio and video formats use some sort of compression so that they don't take up a ridiculous amount of disk space. Audio and video files are compressed with a certain codec when they are saved and then decompressed by the codec when they are played back. Common codecs include MPEG and AVI for video files and WAV and AIFF for audio files. Codecs can also be used to compress streaming media (live audio and video), which makes it possible to broadcast a live audio or video clip over a broadband Internet connection.
- **Compositing:** When you composite, you are placing two images on top of one another in your Timeline. Compositing is most often used to overlay images – perhaps you want to place some footage of ducks swimming on top of footage of a pond. There are many different methods of compositing, with differing effects. Select the image you want to composite, then (from the toolbar) select "Modify" → "Composite Mode."

D

E

- **Edit to Tape:** Instead of Exporting your Final Cut Pro project, you can copy it straight to a video tape, mini-DV tape, or other source with the "Edit to Tape" function. Find this by selecting "File" in the toolbar, and then "Edit to Tape." For more options (like setting leaders and trailers), choose Print to Video.
- **Effects:** Final Cut Pro's effects include video filters, video transitions, audio filters, and audio transitions. Effects can be found under the "Effects" tab in the Browser. Effects can also be found along

the toolbar. When you select an effect (from either the tab or the toolbar), drag it over to the Viewer of your selected clip.

- **Export:** In order for your Final Cut Pro project to become a movie (or audio file, as the case may be) that can be played on a computer, aDVD player, or the Internet, you need to export. To export, set In and Out Points and from the toolbar select "File" → "Export." Now is when you get to decide what Codec you want to use for compression. Exporting will compress your file, so set it to the highest quality necessary. You can always work backward, but you can never add quality to a compressed file. If you are exporting simply to edit within Final Cut Pro or to make a DVD, you can select "Export" → "QuickTime Movie." Otherwise, choose "Export" → "using QuickTime Conversion" and select a Codec from the dropdown menu. Always export these files with unique names and to a unique "Export" folder in your Home Directory.

F

G

H

- **Home Directory:** This is the folder where you will save your Final Cut Pro project, all the files you use in your project, and anything you Export. You will also set your System Settings to link to your home directory. This ensures that Final Cut Pro is saving Renders and Capture metadata. Best practice is to create a separate folder for each Final Cut Pro project. This folder will then live within the "Final Cut Pro Documents" folder that is automatically generated when you set your System Preferences when you start a Final Cut Project. Get in the habit of saving everything to the home directory, and check your System Settings everytime you open a project in Final Cut Pro.

I

- **In and Out Points:** By setting in and out points, you can change when a clip begins and end; think of "in" and "out" as "start" and "finish." This is important for editing and Exporting correctly.

J

K

- **Keyframe:** A special-purpose control that denotes a change in value in a filter or motion parameter. When two keyframes with different values are set in Final Cut Pro, a transition from one value to another is calculated, resulting in a dynamic change to that parameter. For example, keyframes can be set to create fade-in or fade-out in video. Similarly, keyframes may be used in audio files to create fades. The easiest way to set keyframes is in the Viewer: look under the "Motion" tab for Video or the "Stereo" tab for Audio. Audio keyframes can also be set in the Timeline using the "Toggle Clips Overlay" and "Pen tool" buttons. *See pages 18 – 19 for more information.*

L

- **Log and Capture:** When Capturing video or audio from a mini-DV tape, DVD player, VHS tape, Audio Cassette, or live stream, you use Log and Capture. First, make sure that your device is on or, if importing from a camera, that it is both on and set to the "Playback" mode. Then, find the Log and Capture function from the toolbar: Select "File" → "Log and Capture." This will open the Log and Capture window, which should look like the image below.

If you get a warning that says "Unable to initialize video deck. You may still log offline clips or use Capture Now," but you have a deck/device properly connected, you need to help thecomputer locate the deck. First try: (from the toolbar) "View" → "Refresh A/V Devices." If this does not work, you need to reset your A/V devices. From the toolbar: "Final Cut Pro" → "Audio/Visual Settings" Under "Device Control Preset" select "FireWire NTSC." If you are importing from a VHS deck or other Analog device, select "Non-Controllable Device."

Within Log and Capture, you can title the media you are importing from the "Logging" tab. Name the media within the "Description" line. You can get even more specific by labeling "Scene," "Shot/Take," "Angle," and "Log Note."

- **Limit Capture Now:** "Limit Capture Now" refers to the amount of time Final Cut Pro will import your footage during Log and Capture. Importing footage (from VHS, DVD, mini-DV, or a live feed) occurs in real time, so you may not want to pay close attention if your video is longer than a few minutes. Setting the "Limit Capture Now" will set a timeframe for Log and Capture – anywhere from 1 to 240 minutes. Setting the timeframe will prevent Final Cut Pro from importing unnecessary footage, which takes up precious harddrive space. If you do not set a "Limit Capture Now" preference, Final Cut Pro will capture footage until your harddrive is full. For example, if you have a 1-hour tape, you can set the limit to 64 minutes (60 minutes plus 4 additional minutes to be safe), begin the Capture Now process, and then leave and return several hours later. Instead of capturing until your scratch disk is filled, Final Cut Pro stops capturing after 64 minutes. Set "Limit Capture Now" in System Settings. This can be found by clicking, from the toolbar, "Final Cut Pro" → "System Settings." In the window that pops up, look at the bottom line of the first tab ("Scratch Disks".)

M

- **Marker:** A marker flags a specific point on your Timeline or in a Clip so that you can find that spot later. To create a marker on your Timeline, move the Playhead to where you want the marker, then press "m" on the keyboard. To create a marker on your Clip, select the video or audio material and press "m."

N

- **NTSC:** This is the standard North American video format. Analog NTSC video has 525 interlaced lines per frame, a frame rate of 29.97 fps, and a limited color gamut. Digital NTSC video has a frame size of 720 x 486 pixels (720 x 480 for DV and DVD), and a frame rate of 29.97 fps. PAL is a different standard that is not compatible with NTSC. It is possible, however, to import PAL media. You will need both a universal VHS or DVD player and a media converter.

O

- **Offline Clip:** An offline clip is one that the computer cannot locate. In this case, you either did not set your System Settings correctly or you did not save your files to a unique Home Directory. You will see a red slash through these clips in the Browser and you will be unable to see the clips in the Timeline. You will need to relink the media by instructing the computer to search for it. Highlight the offline clip and, from the toolbar, choose "File" → "Reconnect Media." The computer will then search for the file. If it cannot find the clip, you will lose all your edits! The easiest way to avoid offline clips is to save everything in the same Home Directory and to set your System Settings every time you start editing in Final Cut Pro.

P

- **PAL:** Acronym for Phase Alternating Line, a 25 fps (625 lines per frame) interlaced video format used by many European countries. Digital PAL video has a frame size of 720 x 576.
- **Playhead:** This is the small, yellow triangle in the Timeline that corresponds to the frame displayed in the Canvas and the Viewer. You drag the playhead to navigate through a Sequence.
- **Print to Video:** Instead of Exporting your Final Cut Pro project, you can copy it straight to a video tape, mini-DV tape, or other source with the Print to Video function. Find this by selecting "File" in the toolbar, and then "Print to Video." Here you can choose to add a "Leader" (some bit of black, color bars, or a tone that precedes your project) or a "Trailer" (some bit of black that follows your project). There are a few other choices available, like setting looping intervals. Print to Video gives you more options than Edit to Tape.

Q

R

- **Rendering:** The procedure that Final Cut Pro must execute for processes that cannot be completed in real time before they can be viewed; if a Sequence needs rendering, there will be a red line at the top of the Timeline and you will not be able to view the project until the Sequence has been rendered. When there is a green line above the Clip you can still watch or listen to the clip, but you will need to render the clip to optimize the image and sound quality. To render, select the portion that needs rendering (unless you want to render your entire Sequence, in which case nothing needs to be selected) select "Sequence" → "Render In to Out" or "Render All" or "Render Selected."

S

- **Sequence:** An arranged series of video, audio, and graphics clips, edit information, and effects edited together to create a program. A sequence can contain your entire edited program or be limited to a single scene. You may name and add sequences in the Browser. From the toolbar, select "File" → "New" → "Sequence" or Command-Click in the Browser and select "New Sequence."
- **Slug:** A "filler" video and audio clips with no image and no sound. Slugs are useful to preserve time in your Sequence for future material. Also slugs are necessary to add transitions to black. They are generated by selecting the "A" icon in the lower right corner of the Viewer: You can adjust the timing of the Slug in the upper left corner of the Viewer. Drag and drop the Slug into your Timeline.
- **System Settings:** It is absolutely essential that you set your system settings so that they direct Final Cut Pro to save to a unique Home Directory (the folder where you will save your Final Cut Pro project, all the files you use in your project, and anything you Export.) Properly setting your System Settings ensures that Final Cut Pro is saving Renders and Capture metadata to the same place. Best practice is to create a separate folder for each Final Cut Pro project. This folder will then live within the "Final Cut Pro Documents" folder that is automatically generated when you set your System Preferences when you start a Final Cut Project. Get in the habit of saving everything to the Home Directory, and check your System Settings everytime you open a project in Final Cut Pro. To set the System Settings, from the toolbar select "Final Cut Pro" → "System Settings." All you need to worry about is the far left tab called "Scratch Disks." You will need to set all four of the available options to the same folder. "Video Capture," "Audio Capture," "Video Render," and "Audio Render" all link from the first line. Then individually set your "Waveform Cache," "Thumbnail Cache," and "Autosave Vault." You can also choose to set or unset Limit Capture Now at this point.

T

- **Timeline:** A window in Final Cut Pro that displays a chronological view of an open Sequence. Each Sequence has its own tab in the Timeline. You can use the Timeline to edit and arrange a Sequence. The order of the tracks in the Timeline determines the layering order when you combine multiple tracks of video. Changes you make to a Sequence in the Timeline are seen when you play back that sequence in the Canvas. If you modify clips in the Canvas, those changes can be seen in the Timeline. The Timeline is divided in two. The top half displays Video files; the bottom half displays Audio files.
- **Title:** Text that appears over the top of a video clip; create titles using the "Text" folder in the "Video Generators" folder under the "Effects" tab in the Browser or in the Viewer in the lower right corner under the "A" submenu: . Final Cut Pro does not handle text very well – and even though there are many options for fonts, relatively few will actually look good on screen. *See pages 16 – 18 for tips on optimizing text.*
- **Tool Palette:** The tool palette is located to the left of the Timeline (when Final Cut Pro is arranged in the Standard mode.) Here you will find several quick editing functions, among the most pertinent: the "Selection tool," "Razor tool," and "Zoom tool." Click on any of the icons once to use the tool. There are also keyboard shortcuts that you can use. *Please see pages 5 – 9 for more information about the Final Cut Pro workspace and tools.*

U

- **User Preferences:** You can set preferences to make your work flow more smoothly. For example, in User Preferences you tell Final Cut Pro how many Undo actions to permit, what the timing for still images should be, and what quality setting you wish to render. To find User Preferences, select "Final Cut Pro" from the toolbar and then "User Preferences."

V

- **Viewer:** A window that displays a selected Clip. Make imaging and sound edits to Clips in the Viewer. Make sure that you have selected the Clip you want to edit by checking the "Video" tab in the upper left corner. The Viewer and the Canvas do not necessarily display the same footage. If you want to see the changes you are making in the Viewer, set the Playhead in the Timeline to the same place as your selected clip.

W

X

Y

Z